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#### Bibliographic reference for citation:

Boffa Miskell Limited 2025. *Nature-based Solutions Funding & Finance: Pathways*. Report prepared by Boffa Miskell Limited for Otago Regional Council.

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Status: Final	Revision / version: 1.0	Issue date: 8 October 2025	

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## **Key Terms**

Table 1: Glossary of key terms used in this report

Term	Definition	
Biodiversity	The variability among living organisms from all sources, including, inter alia, terrestrial, marine, and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems. (Convention on Biological Diversity, 2006)	
Carbon Credits	A financial instrument that represents one metric tonne of carbon dioxide equivalent $(CO_2e)$ . Carbon credits are awarded for projects that store, avoid, or reduce greenhouse gas (GHG) emissions in the atmosphere. In New Zealand, when the government creates carbon credits under the Emissions Trading Scheme (ETS), they are called New Zealand Units (NZUs)	
Green Bonds	A type of fixed-income instrument where the proceeds are exclusively used to finance or refinance projects with environmental benefits, such as renewable energy, energy efficiency, clean transportation, or sustainable water management.	
Kunming- Montreal Global Biodiversity Framework	A landmark international agreement adopted by 196 countries under the UN Convention on Biological Diversity. Its core mission is to halt and reverse biodiversity loss by 2030. The framework sets a global ambition but requires countries, including New Zealand, to translate it into national biodiversity strategies and action plans that reflect the urgency and scale of the nature crisis	
Nature	A holistic term that encompasses the living environment (te Taiao), which includes all living organisms and the ecological processes that sustain them. By this definition, people are a significant part of nature. This document uses the term 'biodiversity' to refer to biological diversity and 'nature' for the wider processes, functions, and connections in the natural environment, of which biodiversity is a part. (MfE, 2023)	
Nature- based Solutions	Actions to protect, conserve, restore, sustainably use, and manage natural or modified terrestrial, freshwater, coastal and marine ecosystems which address social, economic, and environmental challenges effectively and adaptively, while simultaneously providing human well-being, ecosystem services, resilience, and biodiversity benefits	
Nature Credits	A type of economic instrument that recognises in a consistent way projects or activities that provide positive outcomes for biodiversity, against which 'nature-positive' claims can be made. (MfE, 2023)	
Nature- related Risks	Potential threats posed to an organisation linked to its and other organisations' dependencies on nature and nature impacts. These can derive from physical, transitional and systemic risks.	
Sustainability Linked Loans	A type of financing where the loan terms are tied to the borrower's performance against specific sustainability goals. Unlike green loans, which must be used for environmentally beneficial projects, sustainability-linked loans can be used for general corporate purposes, but they include incentives or penalties based on whether the borrower meets agreed sustainability targets.	

## **Executive Summary**

This report, commissioned by Otago Regional Council, explores the funding and finance pathways available today to support the delivery of Nature-based Solutions (NbS) projects in the Otago region. NbS are essential tools for addressing climate change, biodiversity loss, and natural hazards by offering a range of benefits for communities, ecosystems, the economy, and infrastructure resilience.

Globally, NbS investment is growing, yet delivery of high quality NbS remains underfunded. In 2022, only one-third of the investment required to achieve global climate and biodiversity targets was spent. At present, governments currently provide over 80% of funding for NbS projects globally, but private sector interest is increasing through the emergence of new tools to invest in nature such as green bonds, nature credit markets, and sustainability-linked loans.

This report identifies five core NbS funding and finance approaches that are used internationally to channel investment into nature, that can be accessed in New Zealand. Each approach is evaluated for its applicability in New Zealand and the Otago region, exploring case study examples of where the approach has been used and how the market segment is developing.

To support the Otago Regional Council and its partners to strategically integrate the use of NbS within their asset management portfolios, this report introduces the INSPIRE Framework, developed by the World Economic Forum (WEF, 2025). This framework guides asset managers, like Otago Regional Council through identifying NbS opportunities, structuring investments, and scaling solutions. By strategically integrating NbS within asset management portfolios, their use can be more closely considered alongside existing "grey" approaches for addressing environmental challenges. An investment decision pathway and a NbS typology register have also been provided to support Otago Regional Council and its partners to identify the suitable investment approaches available for NbS projects. Depending on a NbS project's attributes, location, and benefits, investment decision pathways can be used to identify the investment tools most suitable to finance a project.

For NbS to be used more frequently to address natural hazards and other environmental challenges, Otago Regional Council may consider the following actions:

- Understand the opportunities for NbS: Apply the INSPIRE Framework to understand what
  opportunities there are to use NbS across council assets and services, using the NbS
  typology register and investment decision pathways approach to identify scalable, locally
  relevant solutions with clear investment options available.
- **Engage early and frequently:** Engage early and frequently with iwi, community groups, and technical partners to co-design solutions and investment approaches that align with the local environmental, cultural, social, and economic needs and goals.
- Use the full range of funding and finance tools available: Develop NbS investment opportunities, exploring the full range of funding and finance sources available in Otago, including green bonds, nature credit markets, philanthropic giving, and government grants.
- **Grow knowledge for NbS:** Continue to build internal NbS capacity in Otago Regional Council through targeted staff training on NbS planning, financing, and monitoring and by facilitating knowledge sharing across teams.

By adopting a strategic, evidence-based, and partnership-driven approach, Otago Regional Council and its partners can unlock new funding pathways and scale the use of NbS to deliver long-term environmental, social, and economic benefits for the Otago region.

### 1.0 Introduction

#### 1.1 Purpose of this study

Commissioned by the Otago Regional Council, the purpose of this study is to identify the funding and finance pathways available to support the delivery of Nature-based Solutions (NbS) projects in the Otago region.

This NbS funding and finance study will support Otago Regional Council and its partners to:

- Understand what investment tools have worked well internationally to support NbS projects
- Identify how suitable investment tools can be accessed and applied in New Zealand to support NbS projects
- Define how Otago Regional Council and its partners may best engage in funding and finance opportunities to effectively plan, coordinate, and deliver NbS projects.

This study builds upon the findings of Te Hakapupu/Pleasant River Catchment Flooding Hazards – Feasibility Study of Nature-based Solutions (Boffa Miskell, 2025), and other recent analysis of NbS use in New Zealand, funded by the Ministry for the Environment's Essential Freshwater Fund.

As acknowledged in the Te Hakapupu/Pleasant River feasibility study, the current economic and funding framework presents one of the greatest challenges to NbS implementation, making them financially impracticable for many landowners in Otago. To support large-scale adoption of NbS, especially across areas of productive forestry and farming like in Te Hakapupu/Pleasant River catchment, innovative funding and finance approaches are essential.

## 1.2 The need for nature funding & finance

Aotearoa New Zealand and the rest of the world currently face the interconnected crises of climate change and biodiversity loss. Biodiversity, as key indicator of change, in New Zealand is facing an unprecedented challenge. 63% of New Zealand ecosystems are currently threatened. In addition, 82% of New Zealand's birds, 90% of sea birds, 94% of reptiles, 76% of freshwater fish, 78% of amphibians, and 68% of mosses are classified as threatened or at risk of extinction today (Ministry for the Environment & Stats NZ, 2025).

At present, New Zealand has a 'nature-negative' economy. While regional and national policies seek to conserve biodiversity; currently there are few market-based incentives for a landholder or asset manager to restore biodiversity. Accordingly, biodiversity continues to decline.

NbS play a key role in regulating our climate and responding to natural hazards, such as flooding and drought. NbS seek to use natural processes to address environmental challenges, while providing biodiversity, wellbeing, and community benefits. Despite nature's significant potential to alleviate local challenges, the use of NbS has historically been undervalued and under-resourced.

However, as governments and businesses increasingly recognise the role of nature in our collective resilience and prosperity, approaches to nature-related funding and finance is quickly evolving. Since the adoption of the Kunming-Montreal Global Biodiversity Framework, opportunities for nature-based investments have multiplied globally. Investment tools, such as nature credits, green bonds, and sustainability-link loans are increasingly attracting attention from public and private sector organisations to fund vital conservation efforts deliver NbS.

### 1.3 The current state of funding & financing for nature

Extreme weather events and biodiversity loss over the next 10-years are ranked the two greatest risks globally by the World Economic Forum (WEF, 2025). Over half of global Gross Domestic Product (GDP) either moderately or highly dependent on nature and its services (UNEP, 2023). Accordingly, to address global financial risks that are caused by declining biodiversity, it is critical that investment into nature-positive outcomes is significantly increased.

In response to the interconnected crises of climate change and biodiversity loss, NbS can be used to effectively address environmental challenges, while providing biodiversity, human wellbeing, and community benefits. Despite growing investment opportunities globally, NbS needs remain severely underfunded.

Global investment in NbS in 2022 amounted to \$200 billion USD, only a third of the investments needed to achieve global climate change and biodiversity targets by 2030 (UNEP, 2023; Figure 1). While private finance for nature has grown significantly in the past four years, from around \$9.4 billion USD in 2020 to over \$102 billion USD in 2024, governments continue to provide well over 80% of funding for NbS (UNEP FI, 2024).

Following the launch of the Taskforce on Nature-Related Financial Disclosures (TNFD) in 2021, private sector organisations are increasingly seeking to understand and address their nature-related risks and opportunities within their business.

As organisations consider the role of nature as part of their operations and supply chain, many are beginning to change their strategies to direct private investment towards the commercial risks and opportunities presented by nature to their sector. An example of this would be renewable energy generators investing in the restoration of upper catchment areas to preserve the supply and quality of freshwater resources.

#### Public Finance Flows (\$ billion USD)

#### Private Finance Flows (\$ billion USD)

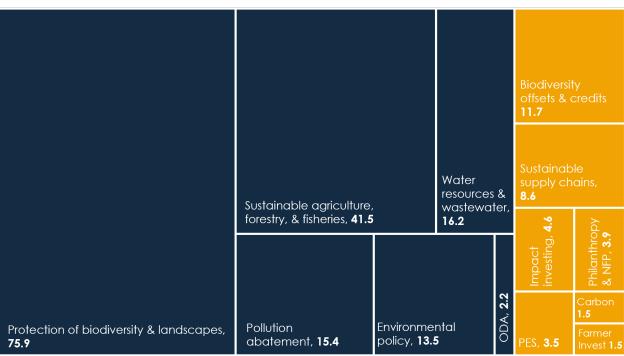


Figure 1: Public and private finance flows to Nature-based Solutions internationally in 2022, \$ billion USD. Adapted from UNEP 2023. (ODA – Official Development Assistance; PES – Payment for Ecosystem Services)



## 2.0 International Funding & Financing for Naturebased Solutions

#### 2.1 Funding & finance approaches used internationally

This section reviews the core funding and finance approaches used internationally to direct investment into NbS projects.

The core funding and finance approaches described below focus on five clusters of investment tools that share common drivers, investment logic, and approaches. The approaches reviewed are non-exhaustive and exclude bespoke activities not suited to the New Zealand context. The approaches are also not mutually exclusive; they illustrate the variety of ways in which nature markets are developing and the various tools available to asset managers and landholders to deliver NbS projects.

#### Funding & finance approaches for Nature-based Solutions:



#### **Government Investment**

Central and local government bodies fund NbS through conservation and environmental management related investments. Funding is commonly allocated using annual government budget, government administered grants, and nature-positive subsidies.



#### **Nature-based Giving**

Not-for-Profit organisations, high net-worth individuals, and businesses fund NbS through investment in conservation projects and nature-related research and development. Funding is provided to projects using philanthropic grants, donations, and commercial partnership funding.



#### Nature-based Debt Finance

Financial institutions, businesses, government bodies, and Non-Governmental Organisations finance NbS through providing sustainable lending facilities for nature-related projects. Funding is acquired through the issuance of green bonds and sustainability-linked loans.



#### Natural Assets & Infrastructure

Government bodies, state-owned enterprises, and private infrastructure providers fund NbS alongside built infrastructure to address environmental challenges. Funding is allocated as investment in natural assets, such as wetlands or forestry, as a standalone asset class.



#### Nature-based Credit Markets

Government bodies, businesses, financial institutions, and Not-for-Profit organisations fund NbS through participating in nature-based credit markets. Funding is provided to projects through the sale of high integrity carbon credits and biodiversity credits.

#### 2.1.1 Government Investment

#### **Investment Tools**

#### **Investor Type**

- · Government Budgets
- · Government Grant Funding
- Nature Positive Subsidies

Government

Government funding dominates financing for NbS globally, responsible for approximately 83-97% of total NbS financing (TNC, 2025).

For NbS, governments predominantly invest in nature to support the delivery of environmental and social outcomes, support economic growth, or meet domestic and international policy commitments. Investments are commonly made using government budget allocations to public institutions for the delivery of planned outcomes, through grant style funding opportunities administered by public institutions, or through nature positive subsidies to financially incentivise positive environmental outcomes.

Investments for NbS related activities are awarded to projects or outcomes that support national environmental commitments, such as transition towards a low-carbon economy, climate adaptation projects, and management of water resources.

Historically, governments have directed larger proportions of nature-related funding and incentives towards carbon mitigation projects, clean transport, and renewable energy due to their ability to directly quantify economic and environmental benefits within politically defined timeframes.

Despite the significant investment in NbS by governments, environmentally harmful government funding and subsidies remain more than ten times greater than government investment in NbS globally (UNEP, 2023).

#### **International Examples**

#### **New Zealand Examples**

- Nature Smart Climate Solutions Fund (Canada)
- Nature Returns Programme (UK)
- Saving Australia's Bushland Programme (Australia)

- Regional Infrastructure Fund
- Essential Freshwater Fund
- Jobs for Nature Programme
- International Visitor Conservation and Tourism Levy



Case Study: Jobs for Nature Programme | Mahi Mō Te Taiao

Activity: In mid-2020, the New Zealand Government established the Jobs for Nature programme in response to the Covid-19 pandemic. The four-year programme created opportunities in nature-based employment with the intention to benefit the environment while sustaining employment in regional communities.

**Approach:** The \$1.185 billion NZD Jobs for Nature programme has financed 516 nature-based projects, led by community groups, councils, iwi and hapū, charitable trusts, and private companies

**Outcomes:** Between 2020 and 2024, the Jobs for Nature programme has funding over 11,422,708 hours worked on nature-based projects, employed over 14,770 people, and enabled the planting of over 11 million plants.

With the Jobs for Nature programme now entering its final year, the Jobs for Nature Transition Strategy is helping to ensure the benefits from these projects endure beyond the life of the funding, with many project groups now seeking other sustainable finance sources (Allen + Clarke, 2025).

#### 2.1.2 Nature-based Giving

#### **Investment Tools**

- Investor Type
- Philanthropic Grant Funding
- Commercial Partnerships ESG Linked Investments, & Services In-kind
- High Net-Worth Individual Donations
- Not-For-Profit Organisations
- Corporates
- High Net-Worth Individuals

Not-for-Profit organisations and philanthropy contribute approximately USD \$3.9 billion per annum to NbS globally (UNEP, 2023).

Not-for-Profit (NFP) organisations, high net-worth individuals, and corporate commercial partnerships can support NbS projects through investment in conservation projects and early-stage nature-related research and development projects. Investments are typically driven by a shared commitment between a landholder and investor to achieving environmental and social outcomes or recognition of the role healthy ecosystems have for societies and land-based economies.

Philanthropic, NFP, and commercial partnership funds can operate globally or locally, often targeting areas of high biodiversity value (biodiversity hotspots). Funds can support innovative solutions tailored to local ecological, cultural, and socioeconomic conditions that may be otherwise deemed too high-risk for a government investor.

Philanthropic, NFP, and commercial partnership funds frequently act as 'keystone investors' in transformational conservation projects, that can take on larger project risks and attract other investors. These investments are typically non-repayable once distributed to a project. However, many investors require some form of impact or outcomes measurement reporting.

#### **International Examples**

- Rockefeller Foundation
- Global Environment Facility
- Green Climate Fund
- BNP Paribas Foundation

#### **New Zealand Examples**

- Tindall Foundation
- New Zealand Nature Fund
- Trees That Count
- New Zealand Lottery Grant



### Case Study: Trees That Count

Activity: For more than 35-years, Trees That Count has been supporting the restoration of New Zealand's native forests. With a growing number of individuals, families, small to medium businesses, and larger enterprises choosing to support nature through tree planting, Trees That Count connect restoration projects with donors to help fund a nationwide network of projects.

**Approach:** Each year, Trees That Count receives tree requests from planters for their restoration projects. In 2024, restoration projects requested 1.31 million native trees for 2025 planting. These requests came from a

total of 356 restoration projects across the country. Each project is assessed by a team of ecologists, using criteria to ensure funds are supporting projects with experienced planters working across sizeable areas of land.

Projects must also have robust weed and pest control plans for the survival of the trees.

**Outcomes:** As of July 2025, Trees That Count have funded the supply and planning of over 2.7 million native trees across 1,703 restoration projects. Of the 2024 tree requests, 200 projects will receive over 500,000 trees for planting during 2025 (TTC, 2025)

#### 2.1.3 Nature-based Debt Finance

#### **Investment Tools**

- Tools Investor Type
- Green Bonds
- Sustainably Linked Loans
- Debt-for-Nature Swaps

- Financial Institutes (Banks)
- Government & SOE
- Non-Governmental Organisation
- Corporates

More than \$1 trillion USD in green, sustainable, and socially linked bonds were issued in 2024, with around half of these issued by private companies (Pollination, 2025).

Nature-based debt finance tools can be used to support NbS projects, while also helping to address sovereign or corporate debt challenges.

Financial institutions, corporates, government entities, and Non-Governmental Organisations (NGO's) are increasingly providing sustainable lending facilities for nature-based projects. By engaging in green and sustainably linked lending through the issuance of bonds and loans, funds are used to support NbS projects or assets that provide measurable outcomes for sustainability. Bonds and loans may be issued at favourable lending rates, or structured where the NbS project receives a discount on its lending rate for achieving sustainability targets.

These investments require financial return, through debt and interest repayments. Accordingly, the project must meet the issuer's standard credit risk expectations and be targeted towards an activity that is expected to generate a revenue, such as forestry goods, food and fibre products, or nature-based credits.

At present, green and sustainably linked investments are predominantly directed towards climate focus projects with quantifiable outcomes and revenue sources, including renewable energy generation and carbon removals. However, the share of green bonds with nature focused themes is quickly increasing, with biodiversity outcomes featured in 16% of bonds issued in 2023 (Pollination, 2025).

#### **International Examples**

- IBRD Sustainable Development Bond (World Bank)
- NextGenerationEU Green Bond (European Commission)
- Sustainability Development Bond (AIIB)

#### **New Zealand Examples**

- New Zealand Sovereign Green Bonds
- Mercury Green Bonds
- Westpac Sustainable Business Loan
- Auckland Council Sustainable Finance



#### Case Study: Auckland Council Green Bonds

**Activity:** In 2021, Auckland Council became a signatory to the C40 Cities Divest/Invest Declaration, committing the council to invest in climate solutions and the green economy. As part of this declaration, the Council also committed to raising debt through sustainable finance mechanisms such as green bonds.

**Approach:** In 2024, Auckland Council settled on its largest ever Green Bond issue, with \$1 billion NZD being raised (Auckland Council, 2025).

Outcomes: Auckland Council's Euro Green Bonds are now supported by well over 100 different European investors and the council's Green Bond proceeds help fund Auckland's sustainability-focused priorities. Since entering the market, 73% of the council's Green Bond proceeds have been invested into clean transportation, 12% for sustainable water and wastewater management, and the remainder for pollution prevention, renewable energy, green buildings, energy efficiency, and sustainable natural resources and land use.

#### 2.1.4 Natural Assets & Infrastructure

#### **Investment Tools**

#### **Investor Type**

- Bioeconomy Investment
- Natural Asset Investment
- Infrastructure Development

- Government & SOE
- Corporates

Government, state-owned, and private infrastructure providers are increasingly using natural assets to complement or replace traditional infrastructure solutions.

Natural assets refer to the components of the natural environment such as forests, soils, freshwater, and biodiversity that provide value to people, either directly or indirectly. Infrastructure providers are increasingly investing in natural assets as NbS to improve existing infrastructure, as an integrated part of new infrastructure, or as a standalone replacement solution.

Natural assets as a standalone asset class have become more prevalent globally in the past five years. Investments associated with this asset class typically include managing agriculture, forestry, fisheries, or natural carbon assets, with the intention to improving the natural environment values which underpin the assets.

Asset and infrastructure providers generally invest in NbS projects that deliver measurable benefits to the natural environment alongside financial returns, such as sustainable land and water use, improved water quality, and land stability. When blended with Nature-based Debt Finance approaches, such as green bonds, these approaches can provide cost effective solutions for asset and infrastructure providers to address environmental challenges.

Fragmentation of land uses and ownership or governance, limited investor familiarity with NbS, as well as a need for robust impact data can commonly limit the use of this investment approach by asset and infrastructure managers.

#### **International Examples**

#### **New Zealand Examples**

- Garron Plateau Peatland Restoration
- DC Water Green Infrastructure
- New Forests Agricultural Real Assets
- Auckland Council Blue Green Network
- Bayside Reserve Stormwater Management



#### Case Study: Garron Plateau Peatland Restoration

Activity: In 2010, Northern Ireland Water and the Northern Ireland Environment Agency, along with the Royal Society for the Protection of Birds began work to restore the Garron Plateau containing the largest area of peat bog in Northern Ireland. Restoration work included building thousands of small timber, peat, and stone dams to block drains and reduce the pressures from livestock grazing. The peatland area of the Garron Plateau feeds into the Dungonnell Reservoir, which supplies water to 12,000 people. However, by 2010, the area became almost completely degraded, causing significant decrease in the quality the water and elevating the costs of water treatment.

**Approach:** Investment was provided by the EU's INTERREG VA Programme, with matchfunding supplied by the government via the Northern Ireland Executive Departments.

**Outcomes:** By 2045, after full restoration, the area will be transformed from a net-emission source to net-emission sink, estimated to sequester 1,146 tCO<sup>2</sup>e/yr, valued at £1,386,978. Additionally, by 2045, the project will achieve a 27% improvement in flood mitigation capacity creating an estimated a reduction of £55,953/yr in average annual damage costs, as well as a projected reduction of £4,158 – £17,325/yr in water treatment costs (NI Water, 2025).

#### 2.1.5 Nature-based Credit Markets

#### **Investment Tools**

#### **Investor Type**

- Nature (Biodiversity) Credits
- Carbon Credits

- Government & SOE
- Corporates
- Non-Governmental Organisation

Global nature-based credit markets are scaling rapidly, with the global carbon credit market alone projected to reach USD \$100 billion annually by 2035 (Oliver Wyman, 2024).

Financing the delivery of nature-based credits, such as carbon credits or nature credits, provides a significant pathway to channel investment into NbS projects. Aligning with international credit standards, nature-based credit projects must deliver environmental outcomes that are both 'additional' and 'durable' to be verified as a credit. Accordingly, investment in nature-based credits supports both the establishment and long-term maintenance of NbS outcomes.

Nature-based credit markets have experienced significant growth globally over the last decade, driven by increasing governmental and corporate climate goals and a rising demand for high-integrity credits. Nature-based credit approaches provide the opportunity for NbS projects to attract private investment in a project's delivery and maintenance. In return, the investor receives the right to claim association or use of the ecosystem services that are measured and verified (e.g., carbon removal and storage, and ecosystem improvement).

Biodiversity compliance is likely to emerge as a larger contributor to credit activity post-2025 as TNFD reporting matures and the implementation of the Global Biodiversity Framework accelerates. At present, approximately 80% of New Zealand exports by value go to markets that have mandatory sustainability reporting in place or proposed. New Zealand, Australia, India, and Europe are currently establishing market frameworks for nature credits, which will help standardise quality and meet demands.

#### **International Examples**

#### **New Zealand Examples**

- Nature Repair Market (Australia)
- Woodland Restoration Code (UK)
- Plan Vivo Nature Credit (Global)
- New Zealand Nature Credit Market
- New Zealand Emission Trading Scheme



Case Study: Silver Fern Farms – Net Carbon Zero by Nature

Activity: Silver Fern Farms 'Net Carbon Zero by Nature' is New Zealand's first certified grass-fed, end-to-end net-carbon zero product range where the equivalent of 100% of end-to-end GHG emissions have been absorbed by trees growing within the farms where the animals we're raised. Silver Fern Farms are supporting and incentivising their farmers to protect, restore, and add to the amount of native bush and tree plantings in gullies, riparian areas, fence lines, summer shade, and shelter belts, so that farm environments are better at capturing carbon, and enhancing biodiversity values on local farms.

**Approach:** The 'Net Carbon Zero by Nature' range is a Toitū net carbonzero certified production system and lifecycle. This means the Silver Fern Farms range is verified to the International Standards Organization ISO 14067

**Outcomes:** This programme rewards farmers who are actively caring for the land through their environmental management practices. Certified products are able to attract a price premium and gain access to international markets that require mandatory sustainability reporting (Silver Fern Farms, 2025).

Table 2: Major investment tools for Nature-based Solutions. \$ (Thousands), \$\$ (Millions), and \$\$\$ (Billions)

Investment Tool	Financial Return to Investor Required	Measurable Environmental Outcome Required	Indicative Scale in New Zealand	Use in New Zealand			
Government Investment							
Government Budgets	Uncommon	Optional	\$\$-\$\$\$	Advanced			
Government Grant Funding	Optional	Optional	\$-\$\$	Advanced			
Nature Positive Subsidies	Uncommon	Required	-	Developing			
Nature-based Givi	ng						
Philanthropic Grant Funding	Uncommon	Optional	\$-\$\$	Established			
Commercial Partnerships & ESG Linked Investments	Uncommon	Optional	\$-\$\$	Established			
High Net-worth Individual Donations	Uncommon	Optional	\$-\$\$	Established			
Nature-based Deb	ot Finance						
Green Bonds	Required	Required	\$\$\$	Established			
Sustainably Linked Loans	Required	Required	\$\$\$	Established			
Debt-for-Nature Swaps	Required	Required	-	Not used			
Natural Assets & In	frastructure						
Bioeconomy Investment	Optional	Required	\$\$	Established			
Natural Asset Investment	Optional	Required	\$-\$\$	Early-stage			
Infrastructure Development	Optional	Required	\$-\$\$	Early-stage			
Nature-based Credit Markets							
Biodiversity Credits	Uncommon	Required	-	Early-stage			
Carbon Credits	Uncommon	Required	\$\$	Advanced			



## 3.0 New Zealand Funding Options

#### 3.1 Current state of funding & finance

Current funding and finance of NbS through environmental expenditure in New Zealand can be split into public sector and private sector sources. Public sector sources are primarily provided for through Government Investment tools (i.e. government budgets). Whereas private sector sources include Nature-based Giving, Nature-based Debt Finance, Natural Assets and Infrastructure, and Nature-based Credit Market tools.

The scale of public sector environmental expenditure can be identified through publicly available financial reporting. However, the scale of private sector environmental expenditure in New Zealand is difficult to quantify at present. To fill this information gap a 'Biodiversity Expenditure Review' (BER) will be conducted in 2025/26 as part of the New Zealand BIOFIN Assessment.<sup>1</sup>

In New Zealand during the 2024-25 fiscal year, government agencies have budgeted approximately \$3.6 billion of expenditure on either environmental protection or resource management activities (PCE, 2024). While land-based ecosystems in New Zealand are estimated to deliver direct benefits equivalent to 27% of New Zealand's GDP, government expenditure to protect and enhance the natural environment is equivalent to only about 2% of total expenditure (WWF, 2024).

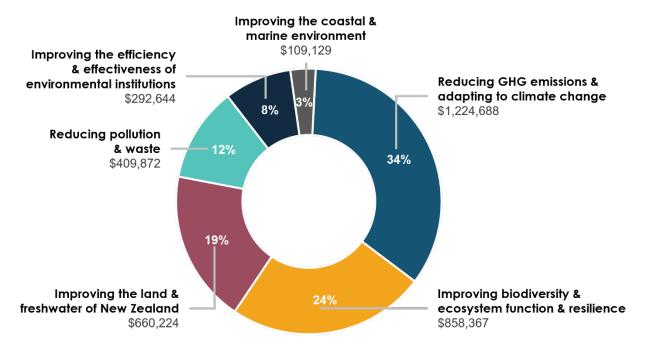


Figure 2: Environmental expenditure of New Zealand government agencies 2023-24, grouped by environmental outcome (PCE, 2024).

Of the \$3.6 billion budgeted for 2024-25, funding has been allocated as shown in Figure 2. Responding to climate change, through reducing greenhouse gas (GHG) emissions and adapting to climate change receives the largest amount of government expenditure. Notably, 2024-25 is the first year on record in which expenditure on climate adaptation has surpassed expenditure on reducing GHG emissions, highlighting the influence that responding to extreme weather events can have on other environmental activities.

<sup>&</sup>lt;sup>1</sup> The New Zealand BIOFIN Assessment, led by the Otago University Business School, will conduct an independent assessment of New Zealand biodiversity funding needs using the UNDP's Biodiversity Finance Initiative (BIOFIN) methodology

### 3.2 Funding & finance options available in Otago

This section evaluates the funding and finance options currently available in Otago and New Zealand to direct investment into NbS projects.

Using the clusters of funding and finance approaches used internationally described in the previous section of this report, this evaluation explores available investment options that could be accessed and applied to support Otago NbS projects. An overview of the core focus and eligibility criteria of various investment tools available is provided, along with an assessment of the opportunities that may exist for using these to fund NbS projects in Otago.

Key factors for selecting these options are whether the funding available would be accessible to Otago Regional Council or its partners; and whether the scale of funding available is large enough to support landscape-scale NbS projects.

#### Funding and finance options for Nature-based Solutions in Otago:



#### **Government Investment**

Regional Infrastructure Fund

International Visitor Conservation and Tourism Levy



#### **Nature-based Giving**

New Zealand Nature Fund

**Trees That Count** 



#### Nature-based Debt Finance

Green Bonds in New Zealand



#### **Nature-based Credit Markets**

New Zealand Emissions Trading Scheme

New Zealand Nature Credit Market

#### 3.3 Government Investment

#### 3.3.1 Regional Infrastructure Fund

### Investment Administrator Investment Recipients

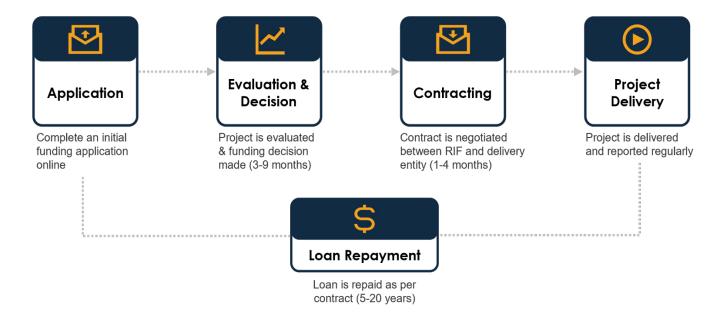
Regional, Economic Development & Investment Unit, Kānoa

New Zealand-based legal entity e.g. council, trust, partnership, iwi.

#### **Core Focus**

The \$1.2 billion Regional Infrastructure Fund (RIF) is the Government's commitment to investing in and improving New Zealand's regional infrastructure.

Of the five investment priorities identified to guide RIF investment, the Resilience Investment Priority aims to support regions to invest in, build, and develop infrastructure that increases the resilience to extreme weather events and other impacts of climate change.



#### About the Regional Infrastructure Fund

The RIF is a capital fund administered by the Regional, Economic Development & Investment Unit, Kānoa. Funding support is primarily provided through a mix of loan and equity investments. The RIF is invested specifically in regional infrastructure, making investments in projects that boost regional growth, resilience, and productivity. This includes building new infrastructure and improving existing structures to benefit regional businesses, organisations, and communities.

The RIF differs to previous regional development funds by having a primary focus on capital investments using loans and equity instruments to support project implementation and success. Co-funding is expected in most cases. The RIF supports projects unable to secure viable finance elsewhere. Investment structures will aim to accelerate projects that would not otherwise happen.

#### **Eligibility Criteria**

To be eligible for consideration for RIF funding, regional entities must meet the specified criteria including aligning with the Otago region's priorities. To be eligible, an applicant must:

- Be focused on delivering a 'hard infrastructure' (e.g. tangible or built assets) asset or completing physical works that protect existing Crown/local infrastructure or assets developed through the RIF.
- Contribute to improving regional resilience and/or productivity.
- Show an ability to deliver, including an implementation plan appropriate to the size, scale
  and nature of the project, robust project governance/decision-making systems and risk
  identification and management.
- Have a co-investment element (e.g. from a private sector investor, iwi, or other non-government entity) unless there are specific reasons why this not possible.
- Require government financial support to progress or to attract private sector investment (either within the region or elsewhere) – in other words, the project would not otherwise happen without RIF support.
- Project funding cannot be used for purchase of land, except in instances where this is essential to the success of an investment-ready RIF project.

Projects must also align the Otago regional RIF priorities, decided by Otago Regional Economic Development Group. These include connectivity, productivity, talent, housing, and sustainability.

#### Nature-based Solution Alignment

To align with RIF eligibility criteria, NbS projects must emphasise the hazard mitigation capabilities of the solution and consist of interventions that deliver hard infrastructure assets or involve the completion of physical works. Projects also must be focused on improving regional resilience, particularly focused on flood hazards, and therefore must be developed to an appropriate size and scale.

These criteria focus the use of the RIF to NbS projects that require a physical change to occur at a landscape scale (i.e., physical work and/or infrastructure to change the character of the natural environment to address a risk). NbS interventions that may align with RIF criteria include:

- Coastal dune renourishment and restoration: Renourishing depleted coastal sand dune
  environments by importing significant volumes of sand, replanting native vegetation to help
  stabilise and trap more sand, and installing fences along dunes to promote dune growth.
- River corridor and floodplain naturalisation: Restoring highly modified river channels and floodplains to a more natural, self-regulating state by retreating stopbank structures, reconnecting floodplains, and constructing water storage areas.
- Wetland construction for floodwater retention: Constructing engineered wetland systems designed to incept and treat stormwater by mimicking the processes of natural wetlands, including deep sedimentation ponds and shallow water vegetated areas.

#### 3.3.2 International Visitor Conservation & Tourism Levy

#### **Investment Administrator**

#### **Investment Recipients**

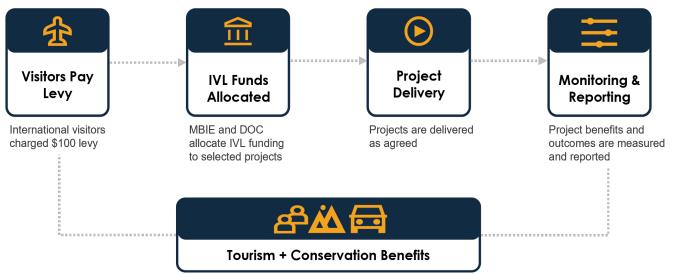
Ministry of Business, Innovation, & Employment; Department of Conservation

Government agencies, iwi and Māori organisations, community groups and non-governmental organisations

#### **Core Focus**

The multi-million-dollar International Visitor Conservation and Tourism Levy (IVL) directs a portion of revenue from New Zealand's international tourism sector to fund conservation and sustainable tourism infrastructure.

Funding from the IVL is split equally between tourism and conservation focused projects. The priorities reflect a shift toward regenerative tourism, climate resilience, and long-term system change.



Projects address challenges in tourism and conservation systems

#### About the International Visitor Conservation & Tourism Levy

The IVL was introduced in 2019 to help mitigate the conservation and tourism costs associated with international visitation and ensure this cost is not unduly borne by New Zealanders. The IVL is funded via a levy that is charged to most international visitors to New Zealand.

Revenue generated from the IVL is split equally (50:50) between conservation projects (administered by the Department of Conservation) and tourism projects (administered by the Ministry of Business, Innovation and Employment). The revenue collected via the IVL funds a series of targeted, prioritised investments that can span multiple financial years. Investment decisions are made jointly by the Minister for Tourism and Hospitality and Ministers of Conservation and Finance (the joint IVL Ministers). The IVL is not a contestable fund.

Revenue collected in the 2023-24 of operation to 30 June 2024 was \$62.5m, down on the forecast of \$70m. This is a significant increase on 2022/23 from \$44.8m. This financial year, expenditure for tourism was \$1.9m across nine projects, expenditure for conservation was \$16.58m across 15 projects.

While local and regional councils do not directly receive IVL funding at this time, there are growing calls for IVL funding to be shared fairly with councils to reduce pressure on ratepayers. In 2024, a poll conducted by LGNZ showed almost 80% of New Zealanders think tourists should be contributing toward the local infrastructure and services they use (LGNZ, 2025).

#### **Eligibility Criteria**

At present, projects must be administered by lead government agencies (DOC and MBIE). Funding recipients can include government agencies, iwi and Māori organisations, community groups and non-governmental organisations involved in conservation or tourism, and collaborative partnerships that deliver measurable benefits to visitors and the environment.

Funding is allocated to projects that align with the IVL Investment Plan priorities. The conservation investment priorities include:

- Support biodiversity and species protection of nationally important and iconic species.
- Provide infrastructure and systems to effectively manage visitor pressures in sensitive environments.
- Support projects that protect wāhi tapu, historic sites, and culturally significant landscapes.
- Strengthen the capacity to enforce conservation law, protect biodiversity, and prevent wildlife trafficking.

The tourism investment priorities include:

- Support nationally significant projects that address system-wide challenges and deliver benefits across multiple regions.
- Support projects that reduce tourisms environmental footprint and enhance resilience, including low-carbon infrastructure, climate adaptation, and nature regeneration.
- Support projects that enhance tourism's contribution to local communities and uphold Māori rights and interests.

#### Nature-based Solution Alignment

To align with the IVL investment priorities and eligibility criteria, NbS projects must emphasise the benefits that the solution will deliver for biodiversity and the tourism economy. Under current IVL criteria, a regional council focused project would also need to be developed in partnership with one of the leading central government agencies, iwi, or non-governmental organisation.

NbS interventions that align with IVL investment priorities include:

- Wilding conifer and weed management: Removing wilding conifer and other weed species in Otago hill country environments and upper catchment areas, supporting the restoration and regeneration of native forests, shrubs, and grasses.
- Lake and waterway improvement: Restoring and enhancing the riparian margins and waterways of iconic Otago lakes and rivers to address sedimentation and water quality challenges.
- Invasive pest control: Protecting and enhancing iconic Otago landscapes through delivery of landscape scale predator control and pest eradication, conserving threatened native species and supporting natural regeneration of native vegetation.

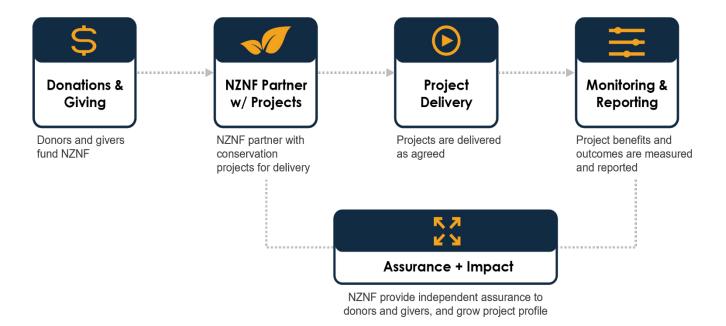
### 3.4 Nature-based Giving

#### 3.4.1 New Zealand Nature Fund

# Investment AdministratorInvestment RecipientsNew Zealand Nature FundAny conservation delivery entity, e.g. council, trust, partnership, iwi.

#### **Core Focus**

The New Zealand Nature Fund (NZNF) raises funds for projects that halt the decline of biodiversity and protect, and restore New Zealand ecosystems and iconic species. The NZNF goal is to bring together conservation donors and investors to raise \$30 million over the next five years.



#### About the New Zealand Nature Fund

The New Zealand Nature Fund (NZNF) is a charitable trust raising funds for the effective protection and restoration of Aotearoa New Zealand's biodiversity. Established in 2001, NZNF is an independent charitable trust. It works closely with conservation partners to enable impactful, long-term conservation work across New Zealand.

NZNF manages donations and private sector contributions. NZNF is a registered charitable trust in both New Zealand and the United States, making donations tax-deductible for supporters who are taxpayers in either country. NZNF raise funds for conservation projects through a combination of individual donations, corporate and commercial partnership funding, and high-net worth philanthropic giving.

NZNF currently support a number of projects that operate within the Otago Region, including the Yellow-eyed Penguin Trust, Takahē Recovery Programme, and the Routeburn Track Project.

#### **Eligibility Criteria**

Typically, NZNF support projects that achieve change at scale. This includes supporting landscape scale projects that bring together smaller local projects to amplify impact or focusing on the recovery of New Zealand's most vulnerable species and habitats as the catalyst for broader ecosystem conservation.

NZNF invests and distributes funds raised to conservation projects that meet their criteria for:

- Ecological effectiveness
- Transparency
- Enduring benefit

#### Nature-based Solution Alignment

To align with NZNF investment criteria, NbS projects must primarily emphasise the benefits that the solution will deliver for biodiversity. As a conservation focused charitable trust, NZNF have flexibility in who they work with and what type of projects they support, however NZNF typically support large landscape scale projects that can amplify or be the catalyst for broader conservation outcomes.

NbS interventions that align with NZNF investment criteria include:

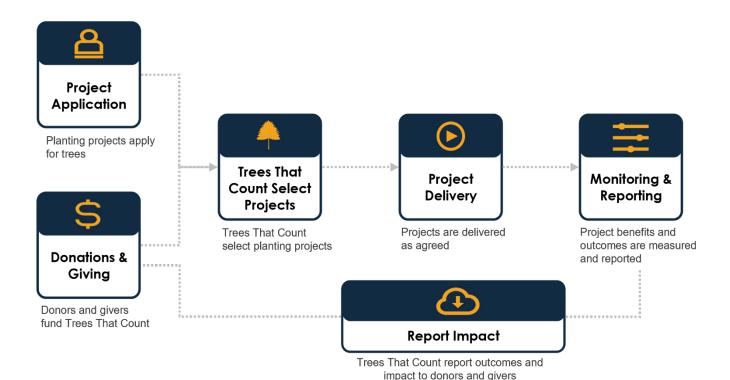
- Wilding conifer and weed management: Removing wilding conifer and other weed species in Otago hill country environments and upper catchment areas, supporting the restoration and regeneration of native forests, shrubs, and grasses.
- **Invasive pest control:** Protecting and enhancing iconic Otago landscapes through delivery of landscape scale predator control and pest eradication, conserving threatened native species and supporting natural regeneration of native vegetation.

#### 3.4.2 Trees That Count

Investment Administrator	Investment Recipients
Trees That Count	Any conservation delivery entity, e.g. council, trust, community group, iwi, and individual landowners

#### **Core Focus**

Trees That Count are an online charitable marketplace, connecting individuals and businesses to fund tree plantings for restoration projects across New Zealand. Funding is voluntary, in the form of charitable donations and gifting.



#### **About Trees That Count**

Since 2016 Trees That Count has been supporting native forest restoration throughout New Zealand, supporting over 1,700 planting projects to plant over 2.7 million native trees. Trees that Count provides native trees to eligible planting projects, with a focus on permanent forest restoration.

Support from Trees That Count comes in the form of in-kind contributions, where trees are supplied through approved nurseries to planting projects, rather than providing direct funding. Projects are required to monitor and report on their progress to ensure long-term success.

The Trees That Count model helps scale up native reforestation, helping to restore biodiversity, clean waterways, and enhance natural carbon sinks. Trees That Count support individual planting projects along with a strategic portfolio of landscape scale projects, including the Halo Project in Dunedin.

#### **Eligibility Criteria**

To be eligible to become an approved planting project with Trees That Count, a restoration project must meet the following criteria:

- Be planting native forests, not amenity landscapes. A minimum of 500 trees must be
  planted in a single season with at least 10,000 trees planned for planting over the project
  lifetime.
- Have a proven track record of planting and caring for native trees.
- Present a detailed pest control, planting, and maintenance plan.
- Trees must be endemic to the planting area and eco-sourced to ensure they thrive in their natural habitat.
- Supported projects must provide monitoring data following planting.

#### Nature-based Solution Alignment

To align with Trees That Count eligibility criteria, NbS projects must consist of interventions that primarily use tree planting to deliver benefits. NbS interventions include:

- **Riparian restoration:** Restoring native vegetation along the riparian margins of waterways to intercept and slow runoff, improve freshwater habitat, and reduce streambank erosion.
- Watershed landcover management: Restoring and expanding large areas of native forest in modified catchment areas to intercept and slow stormwater runoff, improve water quality, and reduce sedimentation.
- Hill country landcover management: Restoring and expanding areas of native forest in steep and erodible modified hill country areas to stabilise hillsides and reduce soil erosion during high rainfall events.

#### 3.5 Nature-based Debt Finance

#### 3.5.1 Green Bonds

#### Investment Administrator Investment Recipients

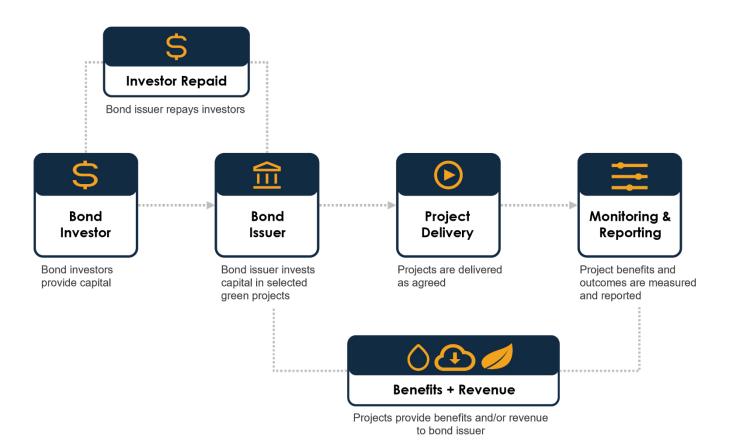
The Green Bond Issuer, e.g. Council in partnership with a bank or financial institute

Council selected projects

#### **Core Focus**

Green bonds are a type of fixed-income financial instrument specifically earmarked to raise money for climate and environmental projects. Like traditional bonds, they pay interest to investors and return the principal amount at maturity. The proceeds from green bond investments are exclusively used for projects with positive environmental outcomes, such as renewable energy, sustainable transport, or biodiversity restoration.

All major Australasian Banks and financial institutes facilitate green bond investments in New Zealand. Additionally, the New Zealand Government Funding Agency (LGFA) – a Council-Controlled Organisation, was established to support financing of New Zealand local government through sustainable lending (including LGFA Green and Social Loans) and Sustainable Financing Bonds.



#### About Green Bonds in New Zealand

Government, councils, and corporate entities in New Zealand can use green bonds to raise the funding required to deliver environmental projects. Typically, the issuer of a green bond work with a bank or financial institution to support the issuance, management, and verification of green bonds. Green bonds often attract investors seeking sustainable and ethical investment options.

Following investment, funds must be allocated to projects that meet strict environmental criteria, defined by the green bond issuers framework. The bond issuers must accurately track, measure, report, and verify how the green bond funds are used and what benefits are achieved.

For council use, green bond investors may be repaid through it's a projects general revenue streams such as carbon credit returns or payment for ecosystem services, along with long-term council financial planning and general rates. As green bonds are used to fund long-life infrastructure assets or restoration projects, a Council can spread the repayment cost over time, aligning with the lifespan of the assets. This ensures intergenerational equity, where those who benefit from the infrastructure also contribute to its cost.

#### **Eligibility Criteria**

The eligibility criteria for allocating green bond funds are defined by the issuer and commonly aligned with international green bond standards.<sup>2</sup> For NbS projects, the investment objectives for green bonds used in New Zealand, such as New Zealand Sovereign Green Bonds, include:

- Enhance sustainable agriculture, horticulture, forestry, and fisheries, sector outcomes.
- Support native afforestation and maintain existing forests.
- Restore and protect freshwater ecosystems.
- Restore and protect New Zealand's natural environment, including indigenous flora.
- Recover and preserve species, including indigenous fauna.
- Increase resilience to natural hazards created or exacerbated by climate change.
- Support sustainable water storage facilities and schemes.

#### Nature-based Solution Alignment

Given the green bond issuer defines the eligibility criteria for allocating funds, a broad range of NbS projects may be funded by green bonds. However, as investments are repaid, green bonds are more suited to supporting NbS projects that create a measurable financial benefit. This may include NbS projects that:

- Generate a financial return, such as through carbon credits, biodiversity credits, or nature-based products like mānuka honey.
- **Improve the productivity** of primary sector outcomes, such as improving soil and quality, providing sustainable water sources, or creating access to markets where investment in nature is a requirement.
- Reduce expenditure associated with land and water management, maintenance, and repair, such as reducing the requirements for water treatment.

<sup>&</sup>lt;sup>2</sup> International standards for green bonds include the International Capital Market Association (ICMA) 2021 Green Bond Principles (GBP), Loan Market Association (LMA) 2025 Green Loan Principles (GLP), and where applicable, the Climate Bond Standards (CBS5)

#### 3.6 Nature-based Credit Markets

#### 3.6.1 New Zealand Emissions Trading Scheme

Environmental Protection Agency; Ministry for Primary Industries

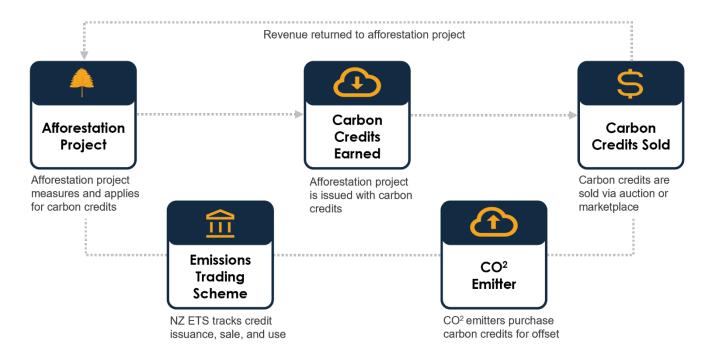
**Investment Administrator** 

Eligible forestry projects

**Investment Recipients** 

#### **Core Focus**

The New Zealand Emissions Trading Scheme (NZ ETS) supports both emissions reduction and afforestation in New Zealand by facilitating the generation, sale, and use of carbon credits. Entities who remove carbon from the atmosphere through eligible forestry projects, can earn carbon credits.



#### About the New Zealand Emissions Trading Scheme

The New Zealand Emissions Trading Scheme (NZ ETS) is a key tool for New Zealand entities to earn and trade carbon credits (New Zealand Units / NZU) needed to meet climate change targets, including the 2050 target set by the Climate Change Response Act 2002.

Introduced in 2008, the NZ ETS is a market-based tool that places a price on carbon emissions, incentivising businesses and individuals to reduce their environmental impact. A number of New Zealand's major greenhouse gases emitting sectors, including forestry, energy, industry, and waste are mandated to offset their emissions through the NZ ETS.

Under the NZ ETS, forest-based carbon credits can be issued to the New Zealand market for purchase either directly from the supplier, through government run auctions, or on the secondary trading market. One carbon credit represents one tonne of carbon dioxide removed from the atmosphere and stored in the biomass of a tree.

#### **Eligibility Criteria**

For a forest to be eligible to earn carbon credits under the NZ ETS it must meet the following criteria:

- The forest must have been established after 31 December 1989.
- The forest must cover at least 1 hectare in area.
- The forest must contain tree species that can reach at least 5m in height when mature in that location.
- The forest must already have, or be expected to reach, crown cover of more than 30% in each hectare.
- The forest area must be at least, or expected to reach, 30m across on average.

A forest entered into the NZ ETS may still be harvested as long as it will be replanted or seeded naturally with forest species within four years of harvesting, meets certain stocking requirements when replanted, and isn't converted to another land use.

Some New Zealand councils strategically enter eligible areas of council-owned land into the NZ ETS as part of their climate change response strategies. For example, Waikato Regional Council has identified that planting up to 1.4% of council owned land in native trees and shrubs would likely be sufficient to offset their corporate GHG emissions and achieve carbon neutrality by 2050 (WRC, 2024).

#### Nature-based Solution Alignment

For a NbS project to align with NZ ETS criteria, interventions must be forest-based, ensuring that the forest type meets the ETS height and area requirements. NbS interventions that align with NZ ETS criteria include:

Afforestation and landcover management: Restoring and expanding large areas of
native forest in previously unforested areas to intercept and slow water runoff, improve
water quality, stabilise hillsides, and reduce soil erosion.

Note, under current NZ ETS settings, riparian vegetation, shelter belts, and scattered planting are not eligible to earn carbon credits.

#### 3.6.2 New Zealand Voluntary Nature Credit Market

#### **Investment Administrator**

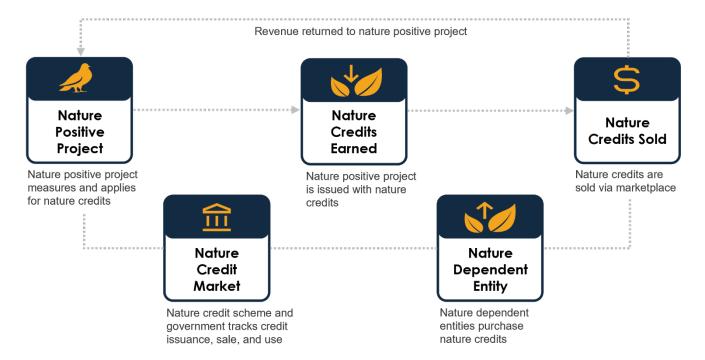
#### **Investment Recipients**

Various Nature Credit scheme providers in alignment with the New Zealand Nature Credit Market Framework

Eligible conservation projects

#### **Core Focus**

Like Carbon Credits, Nature Credits are a financing mechanism that enable investment into nature conservation and restoration projects. By measuring and verifying the land management practices that improves an ecosystem's condition, Nature credits can be generated to be used, sold, or traded.



#### About the New Zealand Voluntary Nature Credit Market

Globally, the Nature Credit Market was valued at \$5.7- \$6.0 billion in 2024 and is projected to reach approximately \$37- \$48 billion by 2032. In New Zealand, businesses and other organisations are increasingly aware of the extent to which their activities rely on nature and are looking for ways to support the environment.

The current demand for voluntary nature credits in New Zealand is driven by businesses' response to global market ESG requirements and to increasing consumer expectations, which call for greater transparency and accountability about the effect their products and services have on the environment. Nature credits can meet these needs for organisations wanting to make, or be associated with, environmental improvements.

In 2025, the New Zealand Government, led by the Ministry for the Environment, began work to support the development and growth of New Zealand's voluntary nature credit market. By establishing integrity principles for projects, supporting assurance standards, and promoting transparency, the government seeks to help the market operate more effectively and with integrity.

#### **Eligibility Criteria**

Eligibility criteria differs depending on the nature credit scheme provider. However, New Zealand nature credits are expected to meet several integrity principles that align with international standards. The proposed integrity principles for the New Zealand market:

- Projects represent positive nature outcomes that are additional to business as usual.
- Project outcomes are durable and long-lasting.
- Projects deliver real, measurable, and verifiable nature outcomes.
- Nature credit schemes are accessible for landholders to participate in.
- Nature credit information is transparent in disclosing, tracking, and verifying information about credits.
- Nature credit schemes and projects are respectful of the rights and interests of Māori and local communities.
- Nature credit schemes use appropriate terminology to support accurate claims made about credits.

#### **Nature-based Solution Alignment**

To align with nature credit requirement, NbS projects must emphasise the benefits that the solution will deliver for biodiversity and/or carbon removal. While a broad range of NbS projects can be supported by a nature credit market, NbS projects that possess the following attributes are generally more suited:

- **Size:** Projects that are over 100-200 hectares in size to ensure the costs associated with measurement, reporting, and verification do not outweigh project delivery costs.
- Metrics: Projects that are able to deliver measurable benefits to ecosystem condition and native species abundance to support high integrity credit claims.
- Land Use Protection: Projects that are able to demonstrate long-term commitments to upholding nature outcomes, either through contractual or legal commitments such as a land covenant.



## 4.0 Otago Funding & Finance Pathways

#### 4.1 Strategic planning for Nature-based Solutions

To support the Otago Regional Council and its partners to effectively plan, finance, and deliver NbS projects, this section provides a structured approach for integrating NbS into asset management and investment strategies.

While NbS are increasingly recognised for their ability to address natural hazards, climate change risks, and improve infrastructure resilience, their uptake remains limited due to fragmented planning and a lack of investment-ready frameworks. For NbS to be used more frequently across the Otago region, they must be strategically planned for and financed in the same manner as all infrastructure – being integrated within a strategic asset management portfolio.

The INSPIRE Framework, adapted from the World Resources Institute (WRI, 2025), can guide asset and investment managers like Otago Regional Council, through a structured approach of identifying NbS opportunities, engaging stakeholders, structuring investment approaches, and scaling solutions. The approach would support Otago Regional Council to embed NbS within their existing asset portfolio and align them with broader environmental, social, and economic outcomes.

Supporting the INSPIRE Framework approach, NbS investment decision pathways and a NbS typology register can assist Otago Regional Council and its partners in matching project types with the appropriate funding and finance tools. These tools are designed to help decision-makers navigate the complex landscape of nature-related investment and ensure that NbS projects are both environmentally effective and financially viable during the planning and development stages.

#### Actions to scale the use of Nature-based Solutions

To progress the integration of NbS into regional investment planning, Otago Regional Council may consider the following actions:

- Understand the opportunities for NbS: Apply the INSPIRE Framework to understand what
  opportunities there are to use NbS across council assets and services, using the NbS
  typology register and investment decision pathways approach to identify scalable, locally
  relevant solutions with clear investment options available.
- **Engage early and frequently:** Engage early and frequently with iwi, community groups, and technical partners to co-design solutions and investment approaches that align with the local environmental, cultural, social, and economic needs and goals.
- Use the full range of funding and finance tools available: Develop NbS investment opportunities, exploring the full range of funding and finance sources available in Otago, including green bonds, nature credit markets, philanthropic giving, and government grants.
- Grow knowledge for NbS: Continue to build internal NbS capacity in Otago Regional Council through targeted staff training on NbS planning, finance, and monitoring and by facilitating knowledge sharing across teams.

By adopting a strategic, evidence-based, and partnership-driven approach, Otago Regional Council can unlock new funding pathways and scale the use of NbS to deliver long-term environmental, social, and economic benefits for the Otago region.

### 4.2 Integrating Nature-based Solutions opportunities

To integrate NbS more frequently into asset management practices, Otago Regional Council may consider a strategic approach to NbS to identifying, planning, and implementing NbS investment opportunities within their portfolio.

Adapted from the framework developed by the World Resource Institute, the INSPIRE framework (Figure 3) is a structured approach for asset managers, like Otago Regional Council, to strengthen NbS investment capacities (WRI, 2025). The framework provides step-by-step guidance for asset managers to integrate NbS considerations into asset management and investment strategies. It helps to identify NbS opportunities within an existing portfolio, structure finance options, and accelerate investment into projects.

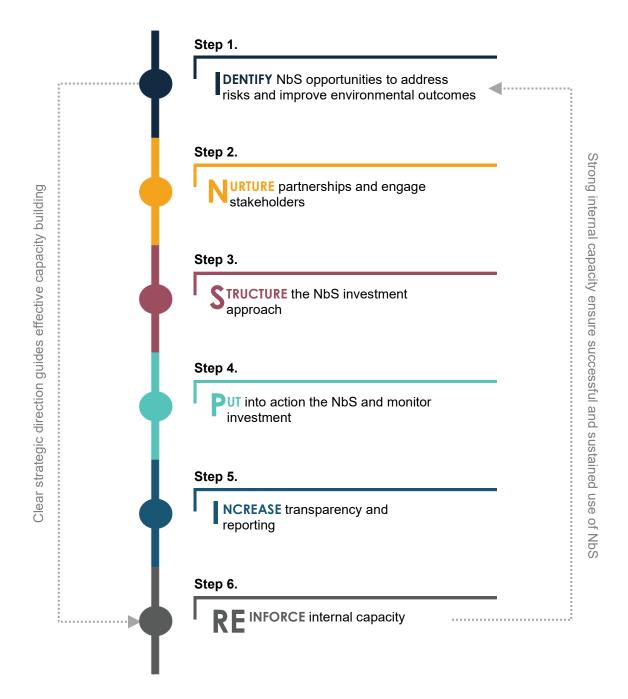


Figure 3: INSPIRE framework to guide investments with NbS opportunities

#### Step 1: Identify Nature-based Solutions opportunities

#### \$1.1 Prioritise target sectors and asset classes

As infrastructure, services, and built assets become increasingly vulnerable to climate-related natural hazards and risks, a critical first step in managing these risks is to better understand the nature and climate risk exposure within an asset managers portfolio. An analysis of these factors helps managers understand how their portfolios are both impacted by and dependent on the natural environment, enabling them to identify key actions for building resilience and actively mitigate risks.

Analysis at the portfolio level can support asset managers to identify and prioritise what sectors and asset classes are most at risk, and what opportunities exist for NbS to provide the greatest benefits. In large and diverse organisations like Otago Regional Council, this step will require engagement and input from all relevant teams, including infrastructure, engineering, environmental, natural hazards, sustainability, community partnerships, and finance teams.

The <u>ENCORE</u> (Exploring Natural Capital Opportunities, Risks, and Exposure) Tool is a key resource available that can help asset managers and councils assess their exposure to nature-related risks and take the first steps to understand their dependencies and impacts on nature.<sup>3</sup> The tool highlights how sectors (e.g. three waters) and asset classes (e.g. water collection, treatment, and supply) may be exposed to accelerating environmental changes such as pollution and climate change.

#### \$1.2 Set the strategic directions for NbS planning and investment

There are two strategic directions that an asset manager can adopt to inform their NbS planning and investment approach:

- a. Investing in NbS as a core component of their business model or strategy to drive direct positive impacts on nature, or:
- b. Investing in NbS as a means to address specific drivers of environmental degradation, such as water quality or soil health.

These strategic directions may be used in parallel depending on the specific characteristics and requirements of different sectors. For example, investing in NbS as a core component to drive direct nature positive impacts may be adopted by sectors that have numerous high dependencies on nature, whereas sectors with lower dependencies may choose to use NbS only to address specific environmental impacts.

By setting the strategic direction of how NbS will be used, asset managers can ensure NbS are planned and funded based on clear performance criteria.

#### \$1.3 Conduct due diligence

Conducting due diligence at the early stages of NbS planning is important for asset managers to ensure NbS use is aligned with existing regulatory requirements and best practice frameworks (e.g. IUCN Global Standards for NbS). Through conducting due diligence, asset managers can better factor in future policy or financial risks and ensure NbS planning remains aligned within regional regulatory settings.

<sup>&</sup>lt;sup>3</sup> The ENCORE Tool was developed by the ENCORE partnership consisting of Global Canopy, UNEP-FI, and UNEP-WCMC

# Step 2. Nurture partnerships and engage stakeholders

To successfully incorporate NbS into asset management portfolios and grow the use of NbS, asset managers must proactively engage a diverse range of stakeholders before, during, and after NbS planning.

## S2.1 Before investment: focus on knowledge gaps and due diligence

Partnering with iwi, community, and technical partners provides essential expertise and input into NbS planning and development. Partnerships offer the means to co-design solutions that will achieve social and cultural co-benefits and can provide access to localised data and mātauranga Māori for biodiversity and ecosystem services important to the area.

By engaging partners from the outset, asset managers can navigate the complexities of NbS investments, ensuring that projects reflect place-based values. It can also help foster trust through transparency and mutual respect with stakeholders affected by the NbS project.

## \$2.2 During investment: facilitate knowledge sharing and influence policy

Collaborating with other asset managers using NbS is beneficial for developing shared methodologies, standards, tools, and databases to facilitate innovation and data-sharing in NbS projects. Given the potential costs and time investments required for NbS projects, promoting knowledge sharing can reduce planning costs and ensure consistency across projects, thereby scaling NbS investments.

Knowledge sharing may be achieved by organising stakeholder workshops, forums, or working groups to facilitate open dialogue and collaboration on NbS. Additionally, knowledge hubs and databases are being increasingly used internationally for sharing NbS research and methodologies. The <a href="NUWAO">NUWAO</a> NbS Oceania database, University of Oxford <a href="NbS Case Study Platform">NbS Case Study Platform</a>, and <a href="Living Shorelines Australia">Living Shorelines Australia</a> database provide examples of knowledge hubs that are maintained to share knowledge and build capacity among NbS practitioners.

# S2.3 After investment: strengthen NbS monitoring and impact reporting

Effective monitoring and reporting systems are important for ensuring the transparency, accountability, and credibility of NbS projects for investors. Having clear monitoring and reporting mechanisms that allow for the accurate tracking of environmental and social outcomes is important for maintaining investor confidence, supporting risk management, and making it possible to scale NbS investments by demonstrating verifiable impact.

Information gathered through ongoing monitoring and reporting of NbS provides the evidence basis needed to demonstrate the benefits of NbS to stakeholders. This information shows the real-world benefits of solutions in local environments and can help to reduce scepticism and misunderstanding of the role of NbS for addressing environmental challenges like natural hazards.

## Step 3. Structure the Nature-based Solutions investment framework

## S3.1 Set investment criteria for NbS performance and impacts

In reference to the strategic direction established in Step 1 (S1.2) identify the measurable outcomes that NbS projects are required to deliver within an asset managers portfolio. These may include metrics such as carbon sequestration (e.g., volume of carbon dioxide captured through reforestation), water quality (e.g., reduction in pollutants), and biodiversity enhancement (e.g., increase in species diversity). Social and cultural metrics may also be incorporated into impact measurement, such as number of local jobs created and abundance on taonga species.

While quantitative metrics provide concrete data, qualitative criteria are also vital, as some environmental impacts are challenging to quantify but remain equally important to investors. To ensure monitoring and reporting of NbS outcomes is cost effective, simple indicators and metrics can be leveraged from existing monitoring data conducted by asset managers.

## \$3.2 Identify investable NbS opportunities

Building on the investment criteria, asset managers can develop a range of NbS investment strategies and financing structures. The NbS investment decision pathways shown in section 4.2 provides a flowchart for asset managers to identify what investment options may be suitable for a NbS project, depending on whether the NbS is able to generate a potential revenue stream and what the investors objectives may be. This approach helps to map investable NbS opportunities by asset class, environmental challenge, potential investor, and expected environmental outcomes.

## Step 4: Put Nature-based Solutions into action and monitor investment

## S4.1 Deploy capital to pilot NbS projects

Asset managers can pilot NbS strategies and investment approaches by spending a limited amount of seed-funding for early-stage projects or by supporting sector-specific partnership projects (e.g. working with farming bodies or catchment groups to support riparian restoration initiatives). By piloting NbS investment approaches, asset managers can gain practical insights into the common planning and implementation needs, data challenges, and the potential benefits and financial returns.

While pilot NbS projects may represent a small proportion of planned NbS portfolios, they offer a cost-effective, hands-on way to test financial structures for NbS to then scale once proven successful. Additionally, pilot projects offer a way to demonstrate the benefits that NbS can provide locally, both to potential investors of NbS projects and to other user groups (e.g. local landholders).

## S4.2 Measure and manage the impacts of NbS investment

NbS projects often generate significant localised impacts on nature and people, making effective impact measurement and management essential for asset managers to understand the performance of the project. Impact measurement and management involves analysing the effects of NbS projects on environmental and social outcomes. Impact measurements should be conducted in alignment with the investment criteria determined in Step 3 (S3.1). They allow asset managers to better assess project performance and risks, navigate changing regulatory requirements, and transparently show the outcomes of NbS projects through clear data and evidence.

Depending on the investment requirements, additional NbS outcome measurements may be required to meet reporting requirements – for example carbon and nature credit schemes often require specific site-based measurements to meet investor standards.

## \$4.3 Refine and scale NbS investment

To successfully scale NbS investments, asset managers can adopt a learning-by-doing approach, leveraging insights from NbS pilot projects to refine planning and investment strategies. It is important to continuously track NbS project performance to determine whether projects are meeting environmental and social expectations, to then be shared and deployed at greater scales. For underperforming projects, asset managers should look to pinpoint the key challenges and implement strategies to adapt. This approach enhances NbS project effectiveness, aligns investments with targeted outcomes, and ensures long-term sustainability of NbS projects.

# Step 5: Increase transparency and reporting

## \$5.1 Align with major impact reporting frameworks

When reporting on NbS project impacts, asset managers can choose to align with international reporting frameworks to improve transparency and scale the use of NbS more broadly. Leading global initiatives such as the Global Reporting Initiative (GRI) and Taskforce on Nature-related Financial Disclosures (TNFD) are continuing to work together to develop nature-based reporting frameworks that provide structured methodologies and standardised metrics for impact reporting.

Table 3 provides a summary of some internationally recognised reporting frameworks used by New Zealand-based companies today. When selecting a reporting framework asset managers should consider alignment with the investment strategy required by the potential investor, and the relevance to the asset class.

Table 3: Summary of internationally recognised nature reporting frameworks

	Sustainability Accounting Standards Board	Global Reporting Initiative	European Sustainability Reporting Standard	Taskforce on Nature-related Financial Disclosures
Developer	International Financial Reporting Standards	GRI	European Financial Reporting Advisory Group	TNFD
Purpose	To help companies disclose sustainability information that is most important to their operations and investors	To help companies disclose their environmental, social, and governance impacts	To standardise corporate sustainability reporting across the European Union (EU), primarily for EU-regulated entities	To provide guidance for reporting and acting on nature- related risks and opportunities
Metrics	77 industry-based standards focusing on financial impacts of nature issues	Universal standards, sector standards, topic standards, including updated biodiversity standard and community impact	Broad sustainability metrics aligned with EU regulations, covering ESG aspects	A structured set of core metrics focusing on how business activities depend on, impact, and respond to nature

## \$5.2 Communicate impact results effectively

Asset managers should clearly communicate NbS investment impacts results to internal teams, council stakeholders, iwi, and partners. Transparent communication builds trust with partners and stakeholders, demonstrates accountability, and highlights the environmental impacts of NbS investments. Transparent communication also helps educate other landholders, asset managers, and the general public to function, use, and benefits of NbS when delivered at scale.

## Step 6: Reinforce internal capacity

### **S6.1 Support internal staff training**

As acknowledged in previous steps, NbS planning and investment requires specialised knowledge and expertise. While expertise can be leveraged through engagement and partnering with iwi, community, and technical partners, asset managers should also invest in internal capacity building. Targeted training programs can be designed to address specific knowledge gaps in the application of NbS in asset management practices, with likely topics including:

- a. How to identify suitable NbS for environmental challenges.
- b. How to identify appropriate investment opportunities for NbS projects.
- c. Measurement and reporting metrics, methods, and requirements.

Staff training can support asset managers to address core knowledge gaps for NbS that often result in them being misused or misinterpreted.

# 4.2.1 INSPIRE Framework Decision Pathways

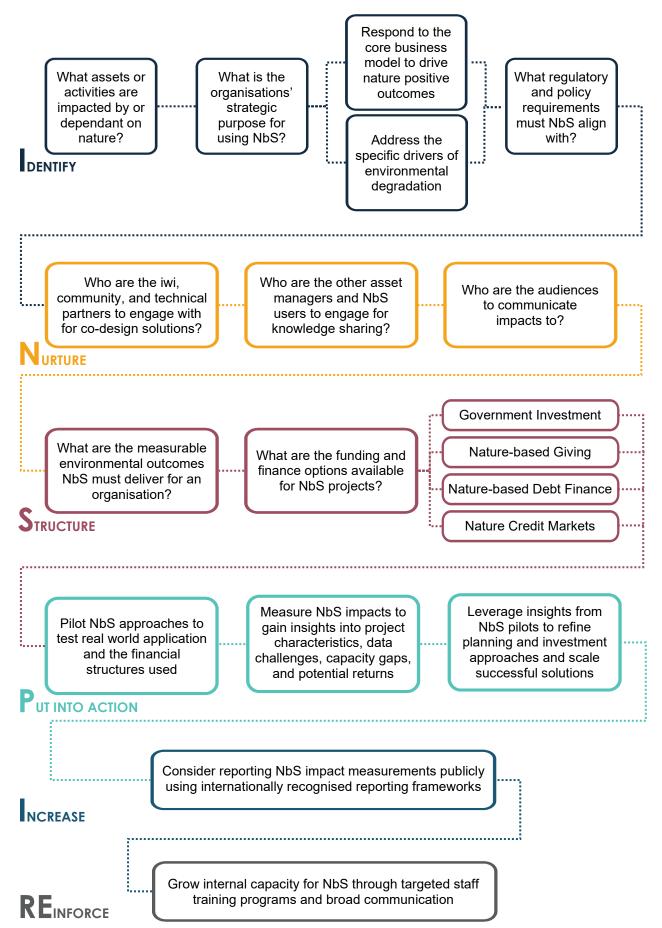


Figure 4: Decision making flow chart for integrating NbS considerations into asset management and investment strategies

# 4.3 Identifying Nature-based Solutions investment options

To support Otago Regional Council and its partners in identifying the appropriate funding and finance options for different NbS projects, investment decision pathways can be used. These pathways are designed to help decision-makers navigate the complex landscape of nature-related investment options by aligning NbS project characteristics with suitable financial tools.

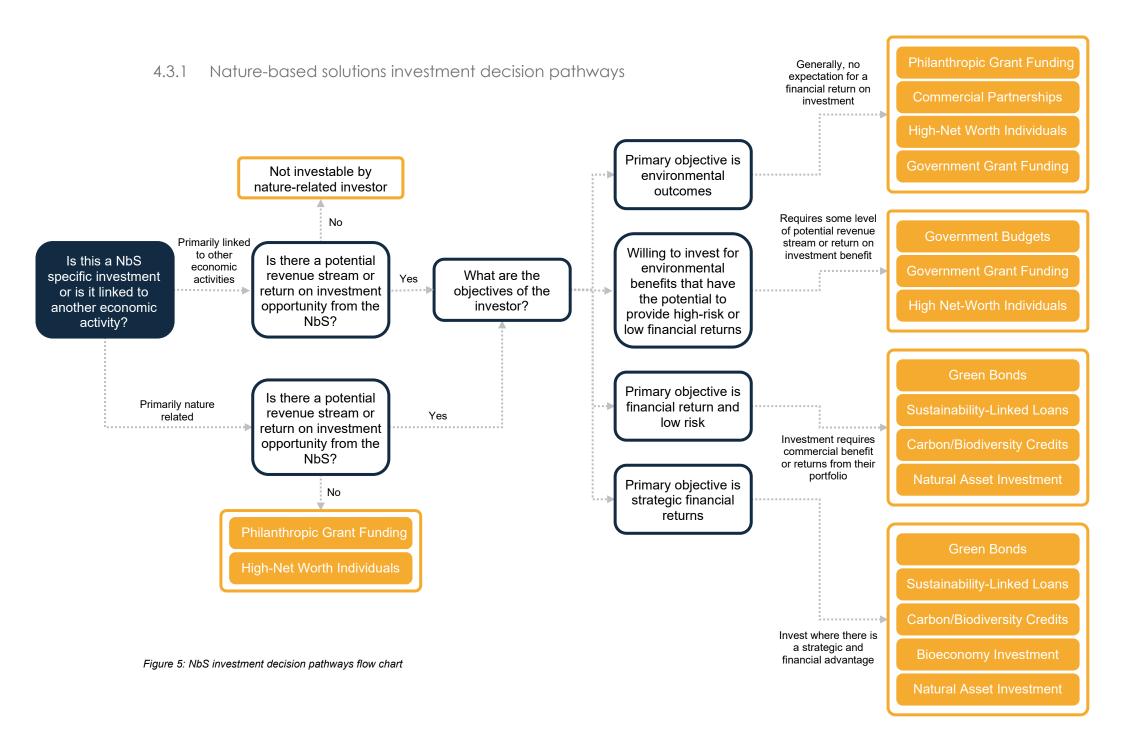
NbS projects can vary widely in their scale, purpose, and potential to generate financial returns. Some may generate benefits specifically linked to economic activities such as agriculture productivity or infrastructure resilience, while others may be focused solely on delivering environmental outcomes to address biodiversity loss. The decision pathways presented here provide a structured approach to assess whether a project is likely to attract investment based on its ability to deliver measurable benefits, such as carbon removal or hazard mitigation, and whether those benefits can be monetised or leveraged for strategic value.

Drawing on the Nature-related Investor Decision Tree developed by Ernst & Young (EY, 2024) for the Ministry for the Environment, this section outlines how Otago Regional Council can match NbS project types with the most appropriate funding sources, including government grants, philanthropic giving, green bonds, and emerging nature credit markets.<sup>4</sup> Funding sources have been grouped by four 'investor categories' identified by EY for nature-related investments (Table 4). By using these pathways, asset managers can make informed decisions that align with both environmental goals and financial realities, ensuring that NbS projects are not only ecologically effective but also financially viable and scalable.

Table 4: NbS investor categories and descriptions, adapted from EY, 2024 Investor Categories for nature-related investments

Category	Investor Types	Description
Deep Green Givers	<ul><li>Government</li><li>Not-For-Profit Organisations</li><li>Corporates</li><li>High Net-Worth Individuals</li></ul>	Investors whose primary objective is environmental outcomes. Generally, there is no expectation for a financial return on investment.
Deep Green Investors	<ul><li>Government</li><li>High Net-Worth Individuals</li></ul>	Investors who are willing to invest for environmental benefits that have the potential to provide high-risk or low financial returns. Requires some level of potential revenue stream or return on investment benefit.
Sustainably Conscious Investors	<ul><li>Financial Institutes (Banks)</li><li>Government &amp; SOE</li><li>Non-Governmental Organisation</li><li>Corporates</li></ul>	Investors whose primary objective is manage environmental and social risks through a low-risk financial return. Investment requires commercial benefits or returns from their portfolio.
Strategic Green Investors	<ul><li>Financial Institutes (Banks)</li><li>Government &amp; SOE</li><li>Corporates</li></ul>	Investors who engage in climate change and biodiversity outcomes only where there is strategic financial returns.

<sup>&</sup>lt;sup>4</sup> 'Scaling up investment into nature-related projects in New Zealand', developed for the Ministry for the Environment (EY, 2024).



# 4.3.2 Nature-based Solutions Typology Register

Table 5 contains a list of NbS that could be applied in the Otago region to address a range of environmental challenges, such as climate change, natural hazards, biodiversity loss, and land degradation. NbS identified in this table include land-based solutions, freshwater solutions, coastal and marine solutions, and urban solutions.

Table 5: NbS typology register of NbS projects that could be applied in the Otago Region.

NbS Project Typology	Environmental Challenge Addressed	Example Project	Is this a NbS specific investment or linked to another economic activity?	Is there a potential revenue stream or return on investment from NbS?	Revenue or return risk profile
Afforestation & Reforestation	Carbon sequestration Deforestation Biodiversity loss Soil erosion Land instability Flood mitigation Water quality	Waiwhakareke Natural Heritage Park Reforestation, Hamilton	Often linked with other economic activities (Forestry)	Carbon and/or biodiversity credits Sustainable timber products Non-timber forest products Natural hazard risk reduction savings	Mainstream - established risk / return profile
Watershed / Landcover Management	Carbon sequestration Deforestation Biodiversity loss Soil erosion Land instability Flood mitigation Water quality	Yuba River Watershed Forest Management, USA	Often linked with other economic activities (Forestry and Agriculture)	Carbon and/or biodiversity credits Sustainable timber products Non-timber forest products Natural hazard risk reduction savings	Mainstream - established risk / return profile
Natural Regeneration	Carbon sequestration Deforestation Biodiversity loss Soil erosion Land instability Flood mitigation Water quality	The Hinewai Reserve Ecological Restoration Project, Banks Peninsula	Often linked with other economic activities (Forestry and Agriculture)	Carbon and/or biodiversity credits Sustainable timber products Non-timber forest products Natural hazard risk reduction savings	Mainstream - established risk / return profile

NbS Project Typology	Environmental Challenge Addressed	Example Project	Is this a NbS specific investment or linked to another economic activity?	Is there a potential revenue stream or return on investment from NbS?	Revenue or return risk profile
Regenerative Agriculture	Soil degradation Water scarcity Carbon sequestration Soil erosion	Multi-paddock adaptive management grazing, USA	Linked to other economic activities (Agriculture)	Reduced agricultural input costs Improved agricultural yields	Mainstream - established risk / return profile
Soil Conservation Techniques	Soil erosion Soil degradation Carbon sequestration	Kaipara Hill Country Erosion Project, Northland	Linked to other economic activities (Agriculture)	Reduced agricultural input costs Improved agricultural yields	Mainstream - established risk / return profile
Pollinator Habitat Creation	Biodiversity loss Deforestation Carbon sequestration	Hakanoa Reserve Pollinator Pathways, Auckland	Often linked with other economic activities (Forestry and Agriculture)	N/A	No financial return potential
Invasive Animal Pest Control	Biodiversity loss Carbon sequestration Deforestation	Biodiversity Benefits in New Zealand Ecosanctuaries, New Zealand	Often linked with other economic activities (Forestry and Agriculture)	Carbon and/or biodiversity credits Biological risk reduction savings (e.g. Bovine TB)	High risk / lower return profile
Wilding Conifer & Weed Control	Biodiversity loss Water quality Soil erosion Land instability Flood mitigation	National Wilding Conifer Control Programme, New Zealand	Often linked with other economic activities (Forestry, Agriculture, Energy Generation, and Urban Development)	Carbon and/or biodiversity credits Natural hazard risk reduction savings	High risk / lower return profile
Wetland Construction & Restoration	Carbon sequestration Biodiversity loss Water quality Flood mitigation Water scarcity	Awarua-Waituna Wetland Restoration, Southland	Often linked with other economic activities (Agriculture and Urban Development)	Carbon and/or biodiversity credits Natural hazard risk reduction savings Water treatment cost savings	Mainstream - established risk / return profile
Riparian Restoration	Water quality Streambank erosion Biodiversity loss Flood mitigation	La Rosa Reserve Stream Daylighting, Auckland	Often linked with other economic activities (Agriculture and Urban Development)	Natural hazard risk reduction savings Water treatment cost savings	Mainstream - established risk / return profile

NbS Project Typology	Environmental Challenge Addressed	Example Project	Is this a NbS specific investment or linked to another economic activity?	Is there a potential revenue stream or return on investment from NbS?	Revenue or return risk profile
Bioswales	Stormwater management Water quality Biodiversity loss	Long Bay Residential Bioswales, Auckland	Often linked with other economic activities (Urban Development and Infrastructure)	Natural hazard risk reduction savings Water treatment cost savings	Mainstream - established risk / return profile
Natural Floodplain Restoration	Flood mitigation Water quality Biodiversity loss Streambank erosion	Natural floodplain management in Eddleston Water, United Kingdom	Often linked with other economic activities (Urban Development and Infrastructure)	Carbon and/or biodiversity credits Natural hazard risk reduction savings Water treatment cost savings	High risk / lower return profile
Peatland Restoration	Carbon sequestration Biodiversity loss Flood mitigation	Restoration of lowland fen for flood management in Wicken Fen, United Kingdom	Often linked with other economic activities (Agriculture and Urban Development)	Carbon and/or biodiversity credits Natural hazard risk reduction savings Water treatment cost savings	High risk / lower return profile
Living Shorelines	Coastal erosion, Biodiversity loss Storm surge protection	Scott's Point Living Shoreline, Australia	Often linked with other economic activities (Urban Development and Infrastructure)	Carbon and/or biodiversity credits Natural hazard risk reduction savings Improved aquaculture yields	High risk / lower return profile
Seagrass Meadow Restoration	Carbon sequestration Biodiversity loss Water quality	Seeds for Snapper Seagrass Restoration, Australia	Often NbS specific investment	Carbon and/or biodiversity credits Water treatment cost savings Improved agricultural yields	High risk / lower return profile
Dune Protection & Restoration	Coastal erosion, Biodiversity loss Storm surge protection	Kapukaulua Dune Restoration Project, USA	Often linked with other economic activities (Urban Development and Infrastructure)	Natural hazard risk reduction savings	Mainstream - established risk / return profile
Beach Nourishment	Coastal erosion, Biodiversity loss Storm surge protection	Jimmys Beach Renourishment, Australia	Often linked with other economic activities (Urban Development and Infrastructure)	Natural hazard risk reduction savings	Mainstream - established risk / return profile

NbS Project Typology	Environmental Challenge Addressed	Example Project	Is this a NbS specific investment or linked to another economic activity?	Is there a potential revenue stream or return on investment from NbS?	Revenue or return risk profile
Saltmarsh Restoration	Carbon sequestration Biodiversity loss Water quality	Penrhyn Estuary Saltmarsh Restoration, Australia	Often NbS specific investment	Carbon and/or biodiversity credits Natural hazard risk reduction savings Water treatment cost savings	High risk / lower return profile
Shellfish Reef Restoration	Biodiversity loss Water quality Coastal erosion	Ramblers Road Shellfish Reef, Australia	Often linked with other economic activities (Aquaculture)	Carbon and/or biodiversity credits Natural hazard risk reduction savings Water treatment cost savings Improved aquaculture yields	High risk / lower return profile
Urban Green Infrastructure	Urban heat island Carbon sequestration Stormwater management	Ōtākaro Orchard Blue- Green Roof, Christchurch	Linked with other economic activities (Urban Development and Infrastructure)	Natural hazard risk reduction savings Water treatment cost savings	Mainstream - established risk / return profile
Green Roofs & Walls	Urban heat island Carbon sequestration Stormwater management Energy efficiency	St Marks Apartments Green Walls, Auckland	Linked with other economic activities (Urban Development)	Natural hazard risk reduction savings Water treatment cost savings Energy efficiency Increased property value	Mainstream - established risk / return profile
Urban Rain Gardens	Stormwater management Water quality	Wynyard Quarter Rain Gardens, Auckland	Linked with other economic activities (Urban Development and Infrastructure)	Natural hazard risk reduction savings Water treatment cost savings	Mainstream - established risk / return profile
Urban Ngahere (Forest)	Urban heat island Carbon sequestration Stormwater management Deforestation	Auckland's Urban Ngāhere (Forest) Strategy, Auckland	Linked with other economic activities (Urban Development and Infrastructure)	Natural hazard risk reduction savings Water treatment cost savings Energy efficiency Increased property value	Mainstream - established risk / return profile

# Conclusion & References



# 5.0 Conclusion

Nature-based Solutions (NbS) represent a significant opportunity for Otago Regional Council and its partners to address the region's most pressing environmental challenges, while delivering co-benefits for communities, infrastructure, and ecosystems. The successful implementation of NbS at an appropriate scale requires a shift in how projects are funded, financed, and integrated into regional asset management.

While government investment remains the cornerstone of NbS funding in New Zealand and abroad, it is insufficient on its own to meet the scale of investment required and ignores the significant sources of capital available within the private sector. By diversifying funding sources, through philanthropic funding, green bonds, sustainability-linked loans, and emerging nature credit markets, asset managers like the Otago Regional Council will be able unlock the full potential of NbS as economically viable solutions. These investment tools offer new pathways for public-private collaboration, enabling Otago Regional Council and its partners the ability to leverage external capital while aligning with environmental and social outcomes.

The introduction of the INSPIRE framework, developed by the World Resource Institute, provides a practical roadmap for asset managers to integrate NbS into their asset portfolios and investment strategies. By identifying nature-related risks and opportunities, engaging with iwi and community partners, and aligning with international reporting standards, Otago Regional Council can continue to build internal capacity and external confidence in NbS as a viable and impactful tool for addressing environmental challenges in the Otago region.

The investment decision pathways and typology register included in this report offer a structured approach to match NbS project types with appropriate investment tools available or emerging in New Zealand. This ensures that projects are not only environmentally effective but also financially sustainable and strategically aligned with regional priorities. such as environmental resilience, economic opportunity, and community wellbeing.

By adopting a strategic, evidence-based, and partnership-driven approach to NbS investment, the Otago Regional Council can catalyse long-term environmental resilience, economic opportunity, and community wellbeing across the Otago region.

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# Wetland construction on multiple private landholdings

## Project:

Constructing an in-stream wetland across 1.5 hectares of privately owned farms to reduce the impacts from flooding, improve water quality, and restore biodiversity values

#### Lead:

**Community Catchment Group** 

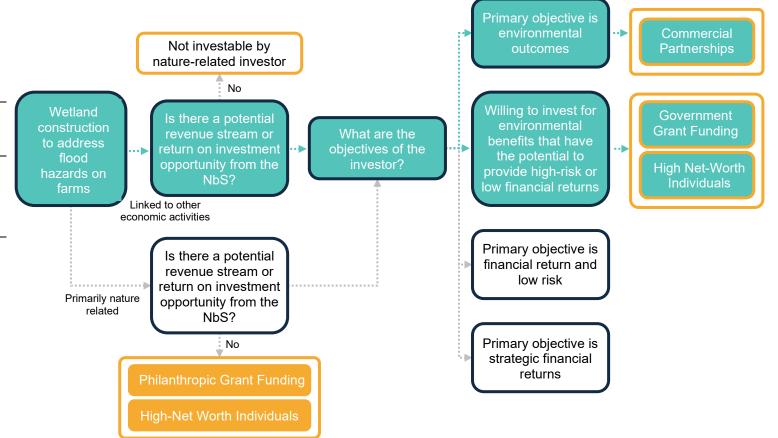
#### **Benefits:**

- Natural hazard risk reduction
- Water treatment cost savings

## **Strategic Objective:**

A community catchment group want to construct a network of wetland areas to reduce the impacts of flooding on farms in the catchment and improve water quality.

Landholders are willing to retire small areas of productive farmland to become wetland, as long as they demonstrate a commercial benefit to their farm operation



## **Investment Logic:**

The NbS project does not operate at a large enough scale to generate a new nature-related revenue stream or provide significant financial benefits at a district or regional scale. However, localised outcomes for landholders of reducing flooding impacts and improving water quality demonstrates clear benefits to farm businesses. This NbS project likely align most strongly with government funding tools, rural commercial partnership funds, and high-net-worth individual investment interests, where investments prioritise environmental outcomes over financial returns.

# Afforestation on one private landholdings

#### Project:

Afforestation on 15 hectares of steep hill country farmland to reduce soil erosion, stabilise land, sequester carbon, and restore biodiversity

#### Lead:

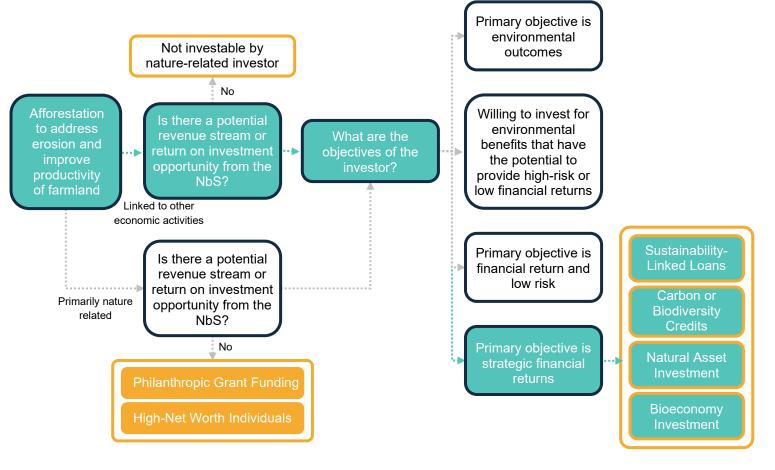
Landholder led

#### **Benefits:**

- Carbon/biodiversity credits
- Natural hazard risk reduction
- Sustainable timber products

## **Strategic Objective:**

A private landholder wants to restore unproductive steep hill country areas with native forest to generate a new nature-related revenue stream while addressing landslide hazards. The landholder wants to improve the productivity of areas of their farm that are currently not suitable for farming.



## **Investment Logic:**

With clear pathways for the afforestation project to sequester carbon, improve biodiversity values, and provide for sustainable timber and non-timber products, this NbS project can generate a new nature-related revenue stream and provide financial benefits for the farm. The landholder's objective of improving the productivity of the farm business could be financed through the use of a sustainability-linked/green loan, natural asset investment, or bioeconomy investment, repaid through revenue generated in future years.

# Coastal dune protection and restoration

## Project:

Dune protection and restoration over 150 hectares of coastlines to stabilise shore environments, reduce coastal erosion, and buffer infrastructure from storm surges and sea-level rise

#### Lead:

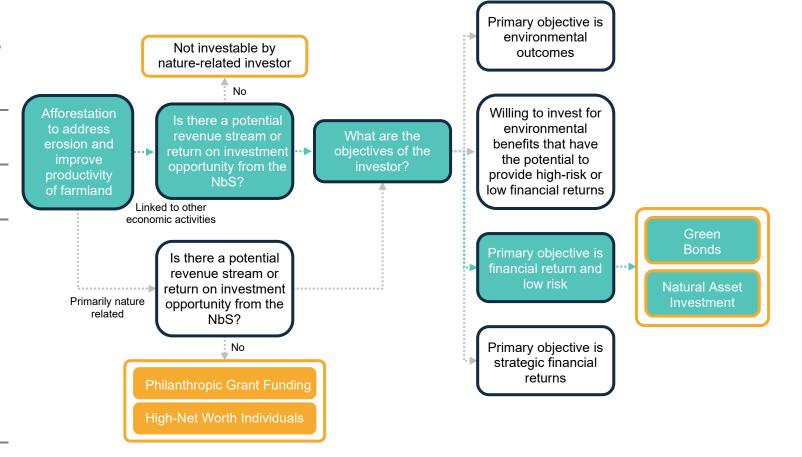
Council led

#### **Benefits:**

Natural hazard risk reduction

# **Strategic Objective:**

A local council wants to protect and restore the coastal dune environment that lies between a rising sea level and a residential community. The council's primary objective is to improve the resilience of the community infrastructure to reduce the costs associated with increasing natural hazard emergency responses, maintenance and repair, and asset write-offs.



# **Investment Logic:**

As the protection and restoration of the coastal dune environment is targeted to manage environmental risks and improve the resilience of built infrastructure, this NbS project could be financed using green bonds and a natural asset investment by the council. Without a clear means for the NbS outcomes to generate a new nature-related revenue stream, the council may use targeted rates or levies to repay the bonds over time. These costs would likely be offset by savings from reduced emergency responses, less asset maintenance and repairs, and reduced asset write-offs.

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